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I claim:

1. 1. A composition of silver in water comprising a total concentration of silver of between about 5 and 40 parts per million, said silver in the form of colloidal silver particles having an interior of elemental silver and
5 a surface of silver oxide, wherein a majority of the colloidal silver particles have a maximum diameter less than 0.015 micrometers, wherein a majority of the colloidal silver particles have a minimum diameter greater than 0.005 micrometers, and wherein the composition manifests antimicrobial properties.
2. The composition according to claim 1, wherein at least
10 75% of the colloidal particles have diameters between 0.005 micrometers and 0.015 micrometers.
3. The composition according to claim 2, wherein at least 90% of the colloidal particles have diameters between 0.005 micrometers and 0.015 micrometers.
- 15 4. The composition according to claim 3, wherein at least 95% of the colloidal particles have diameters between 0.005 micrometers and 0.015 micrometers.
5. The composition according to claim 1, wherein the colloidal particles have an average diameter of about 0.10 to 0.11 micrometers.
- 20 6. The composition according to claim 1 further comprising hydrogen peroxide.
7. The composition according to claim 6, wherein the hydrogen peroxide concentration is between about 1% wght/v and about 3.0% wght/v.

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8. The composition according to claim 1, wherein the composition manifests antimicrobial properties against microbes selected from the group consisting of *Bacillus anthracis*, *Bacillus subtilis*, *Candida albicans*, *Mycobacteria bovis*, *Mycobacteria tuberculosis*, *Pseudomonas aeruginosa*,
5 *Salmonella choleraesius*, *Staphylococcus aureus*, *Trichomonas vaginalis*, and *Yersinia pestis*.

9. The composition according to claim 8, wherein *Staphylococcus aureus* is a methicillin-resistant strain.

10 10. The composition according to claim 1, wherein the composition manifests antimicrobial properties against microbes associated with diseases selected from the group consisting of malaria, fungal infections of the skin, bacterial infections of the skin, vaginal infections, urinary tract infections, tonsillitis, pelvic inflammatory disease, pharyngitis, gonorrhea, conjunctivitis, otitis, respiratory tract infections, and nasal infections.

15 11. The composition according to claim 1, wherein the antimicrobial properties are antiviral properties.

12. The composition according to claim 11, wherein the antiviral properties are exhibited against a virus selected from the group consisting of human immunodeficiency virus and hepatitis B virus.

20 13. The composition according to claim 11, wherein the antiviral properties include inhibition of viral DNA polymerase.

14. The composition according to claim 11, wherein the antiviral properties include inhibition of viral reverse transcriptase.

15. The composition according to claim 1, wherein the composition is a hydrogel formed by dissolving a hydrophilic polymer into the composition of silver in water.

5 16. The composition according to claim 27 formulated as an amorphous gel.

17. The composition according to claim 27 formulated as a solid gel sheet.

10 18. The composition according to claim 27, wherein the hydrophilic polymer is selected from the group consisting of gelatin, carbohydrate polymers and acrylic acid copolymers.

19. The composition according to claim 18, wherein the carbohydrate polymer is selected from the group consisting of cellulose derivatives, alginate, carrageenan, and plant gums.

15 20. The composition according to claim 19, wherein the plant gums are selected from the group consisting of xanthan gum, locust bean gum, gum traganth, guar gum, and gum arabic.

21. The composition according to claim 27 further comprising additives to enhance physical characteristics of the hydrogel and/or enhance wound healing.

20 22. The composition according to claim 21, wherein the additives are selected from the group consisting of vitamins, amino acids, growth factors, maltodextrin, aloe vera and anesthetics.

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23. The composition according to claim 27 further comprising additional antimicrobial agents.

24. The composition according to claim 23 wherein the additional antimicrobial agents are selected from the group consisting of
5 organic acids, alcohols, organic disinfectants, chlorinated phenolics, chlorhexidine, biguanides, surfactants, aldehydes, halogen disinfectants and oxygenating disinfectants.

25. The composition according to claim 15 used as a personal lubricant.

10 26. The composition according to claim 15 used as a disinfectant on diaphragms.

27. A method of disinfecting a surface comprising applying the composition according to claims 1 or 15 to said surface.

15 28. A method of disinfecting a surface comprising applying the composition according to claims 1 or 15, wherein said surface is human skin.

29. A method of eliminating danger from bacteria in water comprising adding an aliquot of the composition according to claim 1 to said water.

20 30. A method of inhibiting viral DNA polymerase comprising adding an aliquot of the composition according to claim 1.

31. A method of inhibiting viral reverse transcriptase comprising adding an aliquot of the composition according to claim 1.

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32. A method of treating a disease selected from the group consisting of malaria, fungal infections of the skin, bacterial infections of the skin, vaginal infections, urinary tract infections, tonsillitis, pelvic inflammatory disease, pharyngitis, gonorrhea, conjunctivitis, otitis, respiratory tract
5 infections, and nasal infections, comprising the step of administering an aliquot of the composition according to claim 1 to a person afflicted with the disease.

33. A method of treating HIV comprising administering an aliquot of the composition according to claim 1 to a person afflicted with HIV.

34. A method of treating hepatitis B comprising administering
10 an aliquot of the composition according to claim 1 to a person afflicted with hepatitis B.